

## **REMARKS**

### **Summary of Amendments**

Upon entry of the present amendment claims 8-13 and 15-36 will be pending, with claims 8, 9, 19 and 29 being independent claims. Claims 1-7 and 14 are canceled and new claims 19-36 are added. Support for the new claims can be found throughout the present specification and in particular, canceled claims 1-7 and 14.

Applicants point out that the cancellation of claims 1-7 and 14 is without prejudice or disclaimer to the prosecution of these claims in one or more continuation and/or divisional applications.

### **Summary of Office Action**

As an initial matter, Applicants note with appreciation that the Office Action indicates that the claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f) is acknowledged and that all certified copies of the priority documents have been received.

Further, Applicants note with appreciation that a signed and initialed copy of the Form PTO-1449 submitted in the Information Disclosure Statement filed March 20, 2002 has been returned together with the present Office Action. Applicants are concurrently filing a Supplemental Information Disclosure Statement and the Examiner is respectfully requested to return a duly signed and initialed copy of the Form PTO-1449 submitted therein with the next communication from the U.S. Patent and Trademark Office.

Applicants also note with appreciation that the Office Action indicates that the drawings filed on December 20, 2001 are accepted by the Examiner.

The restriction requirement is made final and claims 8-13 and 15-18 are withdrawn from further consideration.

Claims 2 and 4 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1-4 and 6 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 3,767,453 to Hoekstra (hereafter "HOEKSTRA").

Claims 5, 7 and 14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over HOEKSTRA.

### **Response to Office Action**

Withdrawal of the rejections of record is respectfully requested, in view of the foregoing amendments and the following remarks.

#### ***Response to Rejection of Claims under 35 U.S.C. § 112, Second Paragraph***

Claims 2 and 4 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Regarding claim 2, the rejection asserts

P21144.A06

that the phrase “such as” renders the claim indefinite because it allegedly is unclear whether the limitations following the phrase are part of the claimed invention. The rejection further contends that it is unclear as to whether the silicon-containing ceramic carrier is constructed with a carrier including both the non-oxide ceramic and oxide ceramic materials or either one because claim 2 recites the term “and” in line 5. With respect to claim 4, the rejection alleges that the term “honeycomb-like porous silicon carbide” does not particularly point out the honeycomb material of the invention.

Applicants note that claims 2 and 4 have been deleted and replaced by claims which do not recite the terms and phrases objected to by the Examiner. Accordingly, this rejection is moot. Applicants point out that the cancellation of claims 2 to 4 is not to be construed as Applicants’ admission that the present rejection is of any merit.

***Response to Rejection of Claims under 35 U.S.C. § 102(b) over HOEKSTRA***

Claims 1-4 and 6 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by HOEKSTRA. In particular, the rejection asserts that HOEKSTRA discloses a high surface area alumina as a uniform thin film that is coated on a particulate, finely divided support such as a cordierite ceramic honeycomb, thereby allegedly anticipating claims 1-4. With respect to claim 6, the Office Action concedes that HOEKSTRA is silent with respect to the characteristics of the alumina thin film but

P21144.A06

alleges that “in view of the same carrier disclosed” the carrier possesses the same characteristics.

This rejection is respectfully traversed. Initially, it is noted that new independent claim 29 recites the subject matter of canceled claim 5, wherefore the above rejection does not affect claim 29 and claims 30-36 depending therefrom. New independent claim 19 recites the subject matter of canceled claim 6, and it is noted that with respect to claim 6, the present rejection appears to be based on an alleged inherent anticipation by HOEKSTRA. The rejection of claim 6 merely alleges that “it is considered the disclosed carrier possess [sic] the same characteristics in view of the same carrier disclosed.”

In this regard, Applicants note that present claim 19 recites

A catalyst carrier, wherein the carrier comprises particles of a silicon-containing ceramic material and each of these particles is covered by a film of alumina, wherein the film of alumina has a specific surface area of 50-300 m<sup>2</sup>/g and a microscopic view thereof indicates a bristled transplant structure comprising fibers having a diameter of from 2 nm to 50 nm, a length of from 20 nm to 300 nm and a ratio of length/diameter of from 5 to 100.

It is not seen that HOEKSTRA discloses a process which will (necessarily) result in an alumina film with the characteristics recited in claim 19. An example of such a process is a hot water treatment of the fired alumina film. In this regard, the Examiner’s

attention is directed to the discussion of the hot water treatment at pages 25 and 26 of the present application (see also, e.g., claim 8, (d) and claim 9, (e)).

HOEKSTRA does not appear to disclose any hot water treatment, any similar process, or any other process which has been shown by the Examiner to necessarily result in an alumina film with the characteristics recited in canceled claim 6 and new claim 19. For this reason alone the rejection of claim 6 is without merit. Accordingly, it is respectfully submitted that HOEKSTRA neither teaches nor suggest a catalyst carrier as recited in claim 19 (or any process which results in such a carrier), wherefore the subject matter of, *inter alia*, claims 19 and claims 20-28 dependent therefrom is both new and non-obvious over HOEKSTRA (as noted above, the present Office Action does not challenge the novelty of the subject matter of present claims 29-36). In this regard, Applicants point out that the cancellation of claim 1 is not to be construed as Applicants' admission that claim 1 is not patentable over HOEKSTRA. Rather, the cancellation of claim 1 merely is to expedite the issuance of a patent on the claims submitted herewith.

***Response to Rejection of Claims under 35 U.S.C. § 103(a) over HOEKSTRA***

Claims 5, 7 and 14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over HOEKSTRA. In this regard, the rejection acknowledges that HOEKSTRA does not disclose the amounts of silica and alumina recited in the rejected claims, but asserts that it would allegedly have been *prima facie* obvious to one of ordinary skill in the art to have predetermined the amounts of silica and alumina which are sufficient to result in an effective carrier since this allegedly involves only routine experimentation.

Applicants respectfully disagree with the above assertion. In particular, with respect to the feature of (canceled) claim 5 which is recited in new independent claim 29, i.e., a layer of SiO<sub>2</sub> on the surface of the silicon-containing ceramic material, it is not seen that HOEKSTRA provides any teaching or suggestion of a corresponding surface layer, let alone a teaching or suggestion of an amount of SiO<sub>2</sub> which would fall within the range recited in claims 5 and 29. In this regard, the Examiner's attention is directed to, e.g., the discussion of the preliminary treating step at pages 20 and 21 of the present application which sets forth some of the advantages associated with a corresponding surface layer.

Since the subject matter of present independent claim 29 is non-obvious over HOEKSTRA for at least the foregoing reasons, there is no need to comment on the allegation regarding the amount of alumina. Applicants' silence in this regard is, however, not to be construed as admission that this allegation is of any merit.

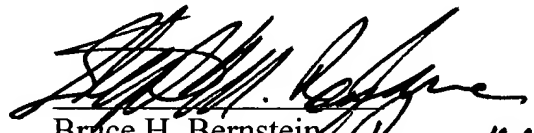
P21144.A06

To sum up, for at least the foregoing reasons, the subject matter of present claim 29 and claims 30-36 dependent therefrom is both novel and non-obvious over HOEKSTRA, wherefore claims 29-36 should be allowed in addition to claims 19-28.

CONCLUSION

In view of the foregoing, it is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted  
Kazushige OHNO et al.

  
Bruce H. Bernstein  
Reg. No. 28,394  
3/22/05

September 24, 2004  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191